

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Currently Amended): A machine for placing components on a printed circuit board, comprising:

- a transport device for transporting printed circuit boards in an X-direction;
- at least one feeder area with components;
- a Y-slide, which is independently drivable in the X-direction; and
- at least two placement heads on said Y-slide,

wherein at least one of the at least two placement heads is configured to place components from the at least one feeder area onto the printed circuit board;

wherein each of the at least two placement heads arranged on said Y-slide is configured to move in the X-direction,

wherein the at least two placement heads are interconnected such that a movement of a first of the at least two placement heads over a certain distance in the X-direction is configured to cause ~~causes~~ a simultaneous, dependent movement of a second of the at least two placement heads over the same distance in the X-direction, and

wherein each of the at least two placement heads is independently drivable in a Y-direction.

2. (Previously Presented): The machine as claimed in claim 1, further comprising:
a plurality of Y-slides,

wherein each of the Y-slides is independently drivable in the X-direction, and

wherein each of the Y-slides is provided with at least two placement heads.

3. (Withdrawn): A method of placing components on a printed circuit board by means of a component placement machine, the method comprising the steps of:

- in a first period of time:

moving a first placement head to a desired X-Y position above a first feeder;

picking-up a component from the first feeder using the first placement head;

and

moving a second placement head along a Y-slide to a desired Y-position so as

to prepare for the placement of a component previously picked up by

the second placement head on the printed circuit board;

- in a second period of time following the first period of time:

moving the second placement head to a desired X-Y position above the printed

circuit board; and

placing the component previously picked up by the second placement head on

the printed circuit board;

- in a third period of time following the second period of time:

moving the second placement head to a desired X-Y position above a second

feeder;

picking up a component from the second feeder using the second placement

head; and

moving the first placement head along the Y-slide to a desired Y-position so

as to prepare for the placement on the printed circuit board of the

component previously picked up by the first placement head in the first

period of time; and

- in a fourth period of time following the third period of time:

moving the first placement head to a desired X-Y position above the printed

circuit board; and

placing the component previously picked up by the first placement head on the

printed circuit board.

4. (Withdrawn): A method of placing components on a printed circuit board by means of a component placement machine, the method comprising the steps of:

- in a first period of time:

moving a first series of placement heads to respective desired X-Y positions above a first feeder;

picking up components from the first feeder using the first series of placement heads; and

moving a second series of placement heads along a plurality of Y-slides to respective desired Y-positions so as to prepare for the placement on the printed circuit board of components previously picked up by the second series of placement heads;

- in a second period of time following the first period of time:

moving the second series of placement heads to respective desired X-Y positions above the printed circuit board; and

placing the components previously picked up by the second series of placement heads simultaneously on the printed circuit board;

- in a third period of time following the second period of time:

moving the second series of placement heads to respective desired X-Y positions above a second feeder;

picking up components from the second feeder using the second series of placement heads; and

moving the first series of placement heads along the plurality of Y-slides to respective desired Y-positions so as to prepare for the placement on the printed circuit board of the components previously picked up in the first period of time by the first series of placement heads; and

– in a fourth period of time following the third period of time:

moving the first series of placement heads to respective desired X-Y positions above the printed circuit board; and

placing the components previously picked up by the first series of placement heads simultaneously on the printed circuit board.

5. (Withdrawn): A machine for placing components on a printed circuit board, comprising:

a transport device that is configured to transport printed circuit boards in an X-direction;

a first feeder area of components that is provided adjacent the transport device;

a second feeder area of component that is provided adjacent the transport device;

one or more Y-slides each of which is independently drivable in the X-direction; and

at least two placement heads on a first of the one or more Y-slides,

wherein a first of the at least two placement heads is configured to place components from the first feeder area onto the printed circuit board,

wherein a second of the at least two placement heads is configured to place components from the second feeder area onto the printed circuit board,

wherein each of the at least two placement heads arranged on the first of the one or more Y-slides is configured to move in the X-direction,

wherein movement of the first of the at least two placement heads over a certain distance in the X-direction causes a simultaneous, dependent movement of the second of the at least two placement heads over the same distance in the X-direction, and

wherein each of the at least two placement heads is independently drivable in a Y-direction.

6. (Withdrawn): The machine as claimed in claim 5, further comprising:

a plurality of Y-slides each of which is provided with at least two placement heads.